Math 213 - Spring 2006

Talk to the grader:

On a trial basis, the grader, John Haga, will be available to talk you to about proofs. We will try this for two weeks. You can meet with John in the MacLab (MSB 203) during the hours he is working there, provided there is not a class meeting in the MacLab. His hours are Monday (3-7PM), Tuesday (10-1 and 5-7), Wednesday (3-5), Thursday (10-12), Friday (3-7).

Class Activities

- Tuesday, Jan. 31: Presented Prop. 2 and 3 from Notes
- Thursday, Feb. 2: Prop 1, 3(redo), 4. Hand in Notebook for grading. Discuss Chapters 4 and 5.
- Tuesday, Feb 7: Quiz (example and a proof to grade), more propositions from notes.

Forum:

1. **February 7, 2006:**
   - I would like the class notes to come from some kind of book that we can own and have the first day of class.
   - **Response:**
     I would too but could not find such a book.
2. **February 4, 2006:**
   - I've been having some trouble proving proposition 5; I can't seem to get anywhere with it. I've tried to use proposition 2 in the proof somehow but have been unable to make any progress. I was wondering if I'm taking the completely wrong approach or if there was any way you could help me. Thanks a lot.
   - **Response:**
     Hint: Use Proposition 4. Think about Proposition 4 as follows. Suppose we have n+1 letters to place in n mailboxes. The Pigeonhole Principle states that at least one mailbox will have at least 2 letters in it. To apply this principle to Proposition 5, label the mailboxes using the possible degrees that a vertex might have and think of the vertices themselves as the letters. You will have to consider a couple of different cases (one would be the case in which no vertex has degree 0) and give a separate argument for each case.
3. **Jan 31, 2006, at 6:00 PM:**
   - Hi Professor Tollefson,
     I had a few concerns regarding how the class is being run. I don't know if it is just me, but I'm having a lot of trouble on the concepts of graph theory and what it even means. I feel as though the set of notes you have provided us with are very confusing. I am confident when doing proofs on subject matters I have some understanding of. For example, with the 3.14 proof, I completed that and felt confident in what I had formulated for the proof. But, when looking through the packet of notes, I am very worried that I will be totally unprepared to complete any of the proofs. I was wondering if there was anything that you could do, or suggestions you have. I know I am not the only one who is having difficulty, but I know many of the other students did not want to address their concerns. This course is extremely important for me considering I am a math major. Thanks so much for your time.
   - **Response:**
     Your concerns are valid. We do need to have some class discussions about the material in the notes. My thinking is that these discussions will be more productive after you have tackled the notes on your own. Discussions can take place anytime you are ready to ask questions.

     One of the things that is difficult to learn is to recognize when you understand something and when you don't (and specifically, pin down what it is you don't understand). This begins with reading definitions. If you could read straight through the notes you would not have a need for this class.

     As for discovering the proof of a given proposition in the notes, there are several approaches. You can talk to class mates, you can ask for hints in class, or you can come talk to me and we can discuss the proof. There will be times when the proof is put on the board before you finish and then you can learn how to do it then.

     Grades: While your work in the early part of the semester can contribute positively to your course grade, it will not be a negative factor as long as you are putting in the effort. Your course grades will start taking shape beginning with the midterm exam which will be based on material we have covered in class.

Textbook:

How to Read and Do Proofs, 4th ed.
by Daniel Solow
Wiley

Online Solutions to Text Problems:

Solow Solutions Page

Instructor:

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Class Notes

Down load Class Notes

The "One-minute Survey"

Please take a minute to write the answer to the following question (no names):

What could we do to improve your learning in this class?

SEND CLEAR FORM